Psychological State of Teachers: Developing and Validating a Standardised Scale

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Authors' contributions

This work was carried out in collaboration among all authors. Authors BJS and FLA conceptualized the research work. Authors JAG, IKG, MA, SR and KTD performed the Methodology. Authors MA, DI, JA and BJS collected the data and ethics. Authors IKG, JA, EE, FLA, DI and KTD did data analysis. Authors IKG, SR and BJS drafted and proofread the manuscript. Author JAG worked as Principal Investigator and did data curation. All authors read and approved the final manuscript.

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ABSTRACT

People show different emotional and psychological states over time due to stress, workload, sleep and other factors. This study examined the emotional and psychological states of 200 Junior High School Teachers. The study employed the quantitative method. The instrument used was a questionnaire. The collected data was analysed using frequencies, percentages, Pearson's Correlation and Regression. The instrument was made based on the experiences of the researchers and available literature. Confirmatory Factor analysis led to the reduction of the number of items on the questionnaire to 40. The results showed that teachers do not freely express their emotions, which affects their sleep patterns. The final questionnaire has strong psychometric properties, including a clear factor structure and adequate reliability. Based on these findings, we recommend that stakeholders like the Ministries of Health and Labour educate teachers on emotion management and encourage them to seek psychological and medical support. We also urge the Ministry of Education to prioritize mental well-being among teachers by incorporating coping methods like positive, emotional, religious, and social coping. To the Mental Health Authority, we recommended that they must intensify their efforts to demystify mental health services, making them accessible to all, and to avoid viewing mental health problems solely through a spiritual lens.

1. INTRODUCTION

Teachers are the cornerstone upon which society build inclusive, equitable and quality education, and they are arguably one of the most important members of our society [1]. Their role and the functions they play in society cannot be downplayed. There are close to 85 million teachers worldwide: 9.4 million in pre-primary; 30.3 million in primary; 18.1 million in lower secondary; 14 million in upper secondary; and 12.5 million in tertiary education [2]. The world needs about 69 million new teachers to reach the 2030 Education goals; 20 million to expand access to primary and secondary school and 49 million to replace those who leave the workforce [2]. Teachers well trained, supported and valued are essential to ensuring quality education for all and meeting the education targets of the Agenda 2030 [3-6].

Teachers play a pivotal role in nation building. They give children purpose, set them up for success as citizens of our world, inspire in them a drive to do well and succeed in life. The children of today are the leaders of tomorrow, and teachers are the agents that make critical decision in a child ready for life. Every job is important, but the teaching job is more important than any job because teachers make every profession. That is how important the teaching profession is. The contribution of teachers to society cannot be overemphasized. According to the University of the People (n.d), teachers have the ability to shape leaders of the future in the best way for society to build positive environment and inspire future generations and therefore build a society, both on a local and global scale. Great teachers have the ability to change lives for the better, and changing life is not easy. Research has shown that the quality of teachers and their welfare is a major determinant of children's learning, well-being and the success of a nation [2].

Everything that affects teachers affects the destiny of people and that of a country [7]. Teachers' health has been a worldwide concern due to the high incidence of occupational and psychological problems they experience [8]. However, one of the areas researchers have not paid much attention to is the teachers' health.

The mental state or well-being and psychological state of a person refer to the same concept: a person's total emotional and cognitive state, including their subjective experiences of happiness, life satisfaction, and the existence or absence of psychological distress. This definition recognises the importance of these states on a person's overall quality of life while acknowledging their dynamic and shifting nature.

1.1 Background to the Study

Teachers around the world face a multitude of problems, including financial, psychological, and health-related issues. These problems range from workload at school to financial issues, academic challenges, and social problems. It is clear that teachers experience emotional and

psychological problems [2], which are among the major challenges they face.

According to UNESCO [3], the COVID-19 pandemic has substantially compromised and deepened the psychological, emotional capacity, health, and welfare problems of teachers. The pandemic has challenged education systems to ensure learning continuity, substantially increasing the demands placed on teachers [3]. Education systems now require effective teaching that facilitates and supports learning instead of merely delivering content. This involves using a combination of in-person and digital methods to deliver lessons, which has been another great burden on teachers and educators as a whole. It is now more difficult and demanding than ever to be a good teacher (Lambert 2009) [2].

In recent decades, there has been a trend towards greater accountability in education [9]. This trend has sparked much research and policy related to identifying evidence-based practices; assessing teacher output; evaluating teacher welfare; assessing curricula strengths/weaknesses; evaluating student performance; etc., all with more challenging standards for student performance evaluation [10,11].

Mental health disorders are among the most burdensome health concerns in the United States WHO, 2022). Nearly 1 in 5 US adults aged 18 or older (18.3% or 44.7 million people) reported mental illness in 2016 [12]. In addition, 71% of adults reported at least one symptom of stress, such as a headache or feeling overwhelmed or anxious [13]. Depression interferes with a person's ability to complete physical job tasks about 20% of the time and reduces cognitive performance about 35% of the time [14]. Mental health issues affect businesses and their employees. Poor mental health and stress can negatively affect employee job performance and productivity, engagement with work, communication with co-workers, physical capability, and daily functioning. Mental health importance and substance use problems are increasing at an alarming rate. Moreover, one group of people who have mental health problems is the teacher.

According to The Guardian [15], one out of 20 teachers has psychological and mental problems that last for years. New research reveals that teachers are facing a mental health crisis without the requisite access to support systems (Harrison 2012) [16]. In a recent assessment conducted by Miami University in Ohio, nearly two-thirds of teachers reported increased concern for emotional exhaustion and anxiety. Teachers are feeling isolated and depressed. They are much less likely than students to have access to mental health resources in school.

1.2 Statement of the Problem

The problems of teachers start from their training and education. According to Bediako and Nti [17], formerly, teachers went through three-year Diploma in Basic Education, (DBE) to be able to teach at the basic school (kindergarten, primary and junior high school) in Ghana. Under the new educational reform, all colleges have been upgraded into university status, awarding degree that has increased teacher training to four years. Teachers who cannot afford to go through four years of regular education undertake two-year post-secondary education by Distance Education. Teachers with diploma go to universities of education to do two years of regular education to get degree [17].

Most occupations involving human services have been found to be demanding; however, teaching has been ranked as one of the most demanding professions [18], with the majority of basic school teachers experiencing a high level of stress [19]. The conditions under which teachers are trained are very stressful. Colleges of education in Ghana lack infrastructure and facilities to train teachers. Teacher trainees do not have comfortable places to sleep. They are crowded into small rooms. The food they give these young teachers is not up to standard because the funds allocated for feeding is not enough. From the training of teachers, they start developing psychological problems.

These teachers are posted to work under bad conditions [20, 21]. The school environment is usually not conducive for learning. Classes are overcrowded; there are no facilities to teach students. Worse still, the employer expects teachers to give their best under these bad conditions (UNICEF n.d). They pressure teachers to deliver with limited resources and conditions. The poor quality of education is reflected in students' results (UNICEF n.d) [21]. Teaching is a noble profession. However, it is one of the jobs that has lost respect in Africa [20]. Available literature reveals that teaching is one of the least paid jobs. Many professional teachers leave teaching to seek greener pastures in other fields that they

think hold promise of better pay and prestige [20]. In 2020, 45,000 teachers left the teaching field to seek better life in other professions [22]. A situation that leads to low morale, mental struggles and psychological problems for teachers and other educationists (Nartey, 2021).

Given the significance of emotional and mental health and its impact on teachers' overall well-being, one would expect substantial research attention in this area. However, there is scarcity of literature on teachers' emotions and mental states [23]. In Ghana, the only available research on teachers' emotional regulation appears to be the Minta-Commey [24] study, which focused on the influence of emotional intelligence on teacher's academic performance. Therefore, this study aims to address the gap in knowledge regarding the emotional and psychological states of teachers. Specifically, this study will investigate teachers' ability to regulate their emotions and the impact of emotional regulation on their sleep patterns.

1.4 Research Questions

1. What are the professional ranks of teachers?
2. How do teachers regulate their emotional state?
3. How do teachers' emotions affect their sleeping behaviour?

2. LITERATURE REVIEW

2.1 Regulation of Emotions

Teachers' emotions have a bearing on their output of work in the classroom and at home. Their ability to teach well, relate with their students and co-workers, undertake co-curricular activities, and manage their family effectively etc., largely depends on how they regulate their emotions [25]. Greenberger & Padesky [26] put this quite well that what an individual thinks about, affects him or her and that affects how they feel, and that thoughts can be regulated. It is believed that what an individual thinks can be regulated.

In a study conducted by Xiyun et al. [27] on the structural model of teachers' self-efficacy, emotional regulation, and psychological wellbeing among English Language teachers in Iran, it was seen that teachers were able to regulate their emotions. Emotional regulation and self-efficacy were predictors of psychological wellbeing of teachers. Teachers were more likely

to experience satisfaction and joy with their job and enrich their personal growth as they reach a strong mental health state when they are able to regulate their emotion.

Sutton et al. [28] conducted a study on teachers' emotional regulation and classroom management. The article attempts to describe the intensity and duration of teachers' emotions, and how their emotions are expressed. It was discovered that teachers regulate their emotions. Teachers practice emotion regulation because they believe it makes them more effective in the management, discipline, and their relationships with students. Teachers are much more confident that they can communicate their positive emotions than reduce their negative emotions, and they use a variety of emotional regulation strategies, including preventive and reactive methods.

In a study conducted by Purnamaningsih [29], it was found out that students could moderate their emotions and this is because of the personality that they have. The purpose of the research was to investigate personality factors' relation with emotion regulation strategies using a sample size of 339 students from the Faculty of Psychology at Universitas Gadja, Mada.

2.2 Effects of Emotion on Sleep

Mcginley & Wei [30] conducted a study on emotional labour and sleep: the moderating effects of life satisfaction. In the study, the result indicated that emotional labour affects sleep when life satisfaction decreases. This means that when people's life satisfaction is low, it affects their emotions, which eventually affects their sleep. El Baba et al. [31] conducted a cross-sectional study on the impact of sleep on medical residents' emotions in Accreditation for Graduate Medical Education at the American University of Beirut. They reported a negative association between sleep and negative emotions. This was because medical workers have a high level of emotional exhaustion. In a study conducted by Vandekerckhove & Wang [32], they found out that adaptive emotional regulation affects the sleep of people.

Petitta et al., [33] study among 1000 employees in Italy found out that contagion of anger was positively associated with both sleep disturbances and health problems whereas contagion of joy was negatively related to only sleep disturbances. This means that specific

emotional characteristics have different effects on sleep.

3. METHODS

Research design: Survey research is simply a data collection tool for carrying out surveys. Rashid et al., [34] defined a survey as a "means for gathering information about the characteristics, actions, or opinions of a large group of people" (p. 17). The method used in this study was the Quantitative method. The design that was employed in the study was the cross-sectional survey design. "To answer questions that have been raised, to solve problems that have been posed or observed". Furthermore, "to assess needs and set goals, to determine whether or not specific objectives have been met, to establish baselines against which future comparisons can be made, to analyse trends across time, and generally, to describe what exists, in what amount, and in what context" [35]. The population for the study was 200 Junior High School Teachers in Okere District of Eastern Region of Ghana. Okere is one of the thirty-three districts in the Eastern Region of Ghana. The district has 540 basic school teachers. The sampling technique used was the simple random sampling. The questionnaires were randomly distributed among the participants so they could respond.

Data collection instrument: A self-developed 7-point Likert scale comprising 40 items was used. The instrument had two main parts, for demographic data and the actual scale; the questionnaire has sections each for Emotional Regulation, Psychological Flexibility, Personality Scale and Sleep Health as sub-scales. This paper concentrated on Emotional Regulation and Sleep Health of the questionnaire. The respondents were asked to answer each question on a Likert format with Emotional regulation items ranging from Strongly Disagree (1) to Strongly Agree (7) and Sleep Health items also ranging from Rarely (1) to Always (3).

Pretesting: A pretesting was done to validate the instrument and determine its validity and trustworthiness. The researchers used 10 percent of 652 teachers in Akwapim North Municipality for the pre-testing. According to Cohen, Manion and Morrison [36], using 10% of the sample size for pre-testing an instrument is laudable. The construct validity was done by expert judgement of faculty members at the University of Cape Coast. Cronbach's alpha reliability coefficient was tested, that produced a value of .76, which is good to use as it has a good internal constituency therefore reliable and valid, according to Lubiano et al., [37].

To ensure validity, confirmatory analysis was done using the Minimum Likelihood method to measure the item loading of the instrument. This helped to reduce the number of items on the instrument to 40 from the initial 44. The results revealed that Kaiser-Mer-Olkin test of sampling was not violated. The instrument has Emotional Regulation, Psychological Flexibility, Personality Scale and Sleep Health as the sub-scales.

The initial version of the questionnaire, which measured teachers' psychological states, was factor-analysed to find underlying constructs and condense the item count. A number of items were updated for clarity and relevance based on the preliminary factor analysis results, while others were eliminated because of low factor loadings or cross-loadings. The findings of a follow-up factor analysis performed on the final questionnaire are presented in this report.

Finalising the instrument: The final questionnaire consisted of 40 items, measuring 4 potential factors related to Psychological State of teachers.

3.1 Normative Data

Based on a sample of 200 teachers, percentile norms were created to interpret the scores. The factor analysis produced four (4) factors, explaining 60.66% of the total variance (Table 2). These factors are: Factor 1: Emotional Regulation, Factor 2: Psychological Flexibility, Factor 3: Personality, and Factor 4: Sleep Health. The factor loadings for each item after rotation were determined; those less than 0.3 were rejected. Cronbach's alpha for each factor indicated satisfactory internal consistency: Emotional Regulation**:** α = 0.703, Psychological Flexibility**:** α = 0.730, Personality**:** α = 0.691 and Sleep Health.**:** α = 0.755.

3.2 Data Analysis

The data was loaded into SPSS (version 29.0) for analysis. We extracted factors using Principal Component Analysis (PCA) and applied varimax rotation to improve interpretation. The scree plot analysis and Kaiser's criterion (eigenvalues exceeding 1) determined the number of factors to retain. The internal consistency of the scale, measured by Cronbach's alpha, was 0.80.

To determine correlations between variables, we performed an exploratory factor analysis using the Principal Component Analysis (PCA) method to identify items for improvement or removal. PCA is the most commonly used method by researchers. It works by extracting the maximum variance and placing it into the first factor. Subsequently, it removes the variance explained by the first factor and extracts the maximum variance for the second factor. This iterative process continues until the last factor.

From the analysis, five components were extracted. Five variables were found to be positively correlated (i.e., 0.30 correlations are required between the research variables). The item: *My painful memories prevent me from having a fulfilling life* positively correlates with the respondent's view that most people handle their life better than he/she does (correlation value is 0.453 > 0.3). Secondly, *my painful memories prevent me from having a fulfilling life* positively correlates with respondents' opinion that worries get in their way of success (correlation value 0.350 > 0.3). Thirdly, respondents' opinion that *emotions are controlled by changing the way one thinks about the situation* positively correlates with more positive emotions are felt by changing the way one thinks about the situation (correlation value 0.623 > 0.3). The Eigen values were used to explain the variances of the factors that were extracted. The first factor explains 15% variance out of the total, this means that 85% variance will be explained by the other factors. The second factor explains 14% variance out of the total; this means that 86% variance will be explained by the other factors. The third and fourth factors also explain 11% variance out of the total, this means that 89% variance will be explained by the other factors and lastly, the fifth factor explains 9% variance out of the total, this means that 91% variance is explained by the other factors. This is presented in Table 1.

Table 1: Communalities

	Initial	Extraction
Sex	1.000	.644
Age	1.000	.748
marital status	1.000	.407
Rank	1.000	.610
When I am feeling positive emotions, I am careful not to express them	1.000	.649
I control my emotions by changing the way I think about the situation I am in	1.000	.711
My painful memories prevent me from having fulfilling life	1.000	.694
It seems like most people handle their life better than I do	1.000	.658
Worries get in my way of success	1.000	.657
Are you satisfied with your sleep?	1.000	.561
Do you sleep between 6 and 8 hours a day?	1.000	.591
Do you go to bed and get out of bed about the same time every day?	1.000	.347

Table 2. Total variance

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.800	14.998	14.998	1.800	14.998	14.998
2	1.710	14.251	29.249	1.710	14.251	29.249
3	1.354	11.284	40.533	1.354	11.284	40.533
4	1.325	11.038	51.571	1.325	11.038	51.571
5	1.091	9.089	60.660	1.091	9.089	60.660
6	.995	8.296	68.956			
7	.914	7.621	76.576			
8	.743	6.191	82.768			
9	.689	5.743	88.511			
10	.550	4.580	93.091			
11	.453	3.773	96.864			
12	.376	3.136	100.000			

Table 3. Ages and sex of respondents

Age	20-29 years Percentage (%)	30-39 years Percentage (%)	40-49 years Percentage (%)	50-59 years Percentage (%)
Sex: Male	13(11.21)	49(42.2)	44(38.0)	10(8.6)
Female	18(21.4)	35(41.7)	20(23.8)	11(13.1)
Total	**31(15.0)**	**84(42.0)**	**64(32.0)**	**21(10.5)**

Table 4. Professional rank of the respondents

Rank	Frequency	Valid Percent
Principal Superintendent	58	29.0
Assistant Director II	33	16.5
Assistant Director I	11	5.5
Deputy Director	9	4.5
Senior Superintendent I	30	15.0
Senior Superintendent II	59	29.5
Total	**200**	**100.0**

3.3 Reliability and Validity

The instrument's reliability and appropriateness were assessed using Cronbach's Alpha, a measure of internal consistency and stability, which yielded a value of .76. The reliability coefficient was then calculated, and refinements were iteratively implemented until the correlation exceeded 0.7, a threshold considered acceptable for use [37]. To assess the extent to which instrument items adequately measured the intended constructs, the content validity ratio (CVR) was calculated. The resulting CVR value of 0.8 indicates a high degree of validity [38].

Additionally, a construct validity test was conducted to evaluate both convergent and discriminant validity. Correlations were examined to determine if the test results were positively or negatively related to established tests. The construct validity test demonstrated a positive correlation among the instrument's variables.

3.4 Presentation of Findings

A total of 200 valid questionnaires were processed for analysis, of which 116 were males. However, out of the 116 respondents who were males, 13 (11.2%) were between the ages of 20-29 years, 49 (42.2%) were between the ages of 30-39 years, 44 (37.9%) were also between the ages of 40-49 years, and 10 (8.6%) of the respondents were between the ages of 50-59 years. Out of the 84 respondents who were females, 18 (21.4%) were between the ages of 20-29 years, 35 (41.7%) of the respondents were between the ages of 30-39 years, 20 (23.8%) of

the respondents were between the ages of 40-49 years, and 11 (13.1%) of the respondents were between the ages of 50-59 years. This is presented in Table 3.

On the issue of respondents' marital status, the respondents, 124 (62.0%) of the respondents were married, 56 (28.0%) of the respondents were single, 11 (5.5%) of the respondents were divorced, and 9 (4.5%) of the respondents were cohabiting.

On professional ranks of respondents, Principal Superintendents were 58 (29.0%); Assistant Director II were 33 representing 16.5%; 11 (5.5%) of the respondents had attained the rank of Assistant Director I; Deputy Directors were 9 representing 4.5%; 30 (15.0%) of the respondents were Senior Superintendent I; and 59 (29.5%) of the respondents were on the rank of Senior Superintendent II. Table 4 shows the above.

Respondents' opinion on how a teacher regulates their emotions: The respondents were asked about their opinion on how they regulate their emotions. Eighty-two (41.0%) agreed that when they want to feel more positive emotion, they change what they are thinking about. 30 (15.0%) agreed somewhat, 28 (14.0%) strongly disagreed, 18 (9.0%) disagreed, and 11 (5.5%) neither agreed nor disagreed and strongly agreed respectively.

Fifty (25.0%) of the respondents, agreed that they keep their emotions to themselves, 45 (22.5%) agreed somewhat, 31 (15.5%) disagreed with the fact that they keep their emotions to

themselves, 22 (11.0%) strongly disagreed, 17 (8.5%) disagreed somewhat and 25 (12.5%) neither agreed nor disagreed. 10 (5.0%) of the respondents strongly agreed to keep their emotions to themselves. Also, 58 (29.0%) agreed to change what they are thinking about when they want to feel less negative emotion, 33 (16.5%) neither agreed nor disagreed, 27 (13.5%) disagreed, and 25 (12.5%) agreed somewhat and strongly agreed respectively. 9 (4.5%) of the respondents disagreed somewhat that they change what they are thinking about when they want to feel less negative emotion.

In addition, 51 (25.5%) agreed that they are careful not to express themselves when they feel positive emotions, 39 (19.5%) strongly disagreed, 32 (16.0%) agreed somewhat, 20 (10.0%) neither agreed nor disagreed and 15 (7.5%) disagreed somewhat. 13 (6.5%) of the respondents strongly agreed that they are careful not to express themselves when they feel positive emotions. This is shown in Table 5.

Sixty-eight (34.0%) of the participants revealed that when they are faced with a stressful situation, they make themselves think about ways that help them stay calm. 33 (16.5%) agreed somewhat, 29 (14.5%) strongly agreed, 24 (12.0%) strongly disagreed, 21 (10.5%)

disagreed, 16 (8.0%) neither agreed nor disagreed and 8 (4.0%) disagreed somewhat. However, 59 (29.5%) of the respondents agreed that they control their emotions by not expressing them, 39 (19.5%) agreed somewhat that they control their emotions by not expressing them, 33 (16.5%) disagreed, 26 (13.0%) strongly disagreed, 18 (9.0%) strongly disagreed, 13 (6.5%) neither agreed nor disagreed and 12 (6.0%) disagreed somewhat that they control their emotions by not expressing them.

A majority of respondents, 93 (46.5%) agreed that when they want to feel more positive emotion, they change the way they think about the situation. 52 (26.0%) strongly agreed, 23 (11.5%) agreed somewhat, 17 (8.5%) disagreed, 8 (4.0%) neither agreed nor disagreed, 5 (2.5%) disagreed somewhat and 2 (1.0%) strongly disagreed. This is shown in Table 6.

How emotions affect sleeping behaviours: The respondents were asked about how their emotions affect their sleeping behaviour. Out of the respondents, 112 (56.0%) were not satisfied with their sleep, 58 (29.0%) were sometimes satisfied with their sleep and 30 (15.0%) said they are always satisfied with their sleep. However, from the results, the majority of the respondents said they had a problem with their sleep.

Table 5. When I am feeling more positive emotions; I am careful not to express them

	Frequency	Valid Percent (%)
Strongly disagree	39	19.5
Disagree	30	15.0
Disagree somewhat	15	7.5
Neither agree nor disagree	20	10.0
Agree somewhat	32	16.0
Agree	51	25.5
Strongly agree	13	6.5
Total	200	100.0

Table 6. Controlling my emotions by challenging the way I think about the situation

	Frequency	Valid Percent (%)
Strongly disagree	2	1.0
Disagree	17	8.5
Disagree somewhat	5	2.5
Neither agree nor disagree	8	4.0
Agree somewhat	23	11.5
Agree	93	46.5
Strongly agree	52	26.0
Total	200	100.0

Table 7. How emotions affect sleeping behaviour

	Never	Sometimes	Always
Are you satisfied with your sleep	112	58	30
Do you have a regular sleep pattern?	90	98	12
Does your emotion affect your sleep?	49	49	102

In addition, 102 (51.0%) of the respondents said their emotions affect them hence they do not have a regular sleep pattern, while 49 (24.5%) of the respondents sometimes have a regular sleep pattern that is between 6 to 8 hours a day. In addition, it was seen that 102 (51.0%) of the respondents said their emotions affect their sleep, while 49 (24.5%) said sometimes their emotions affect their sleep and another 49 (24.5%) of the respondents said their emotions do not affect their sleep.

From the results above, the majority of the respondents were not satisfied with their sleeping behaviour. They do not have a regular sleeping pattern and their emotions also affect their sleeping behaviour (Ref Table 7).

4. DISCUSSION

The final questionnaire's factor analysis results showed a distinct four-component structure. Supporting the construct validity of the measure, the found factors align with the theoretical framework regarding the psychological state of teachers. The components' clarity and interpretability were enhanced by the removal and modification of items determined by the preliminary factors.

The results of the reliability *factor* showed that every factor is internally consistent, implying that every factor's items measure the same underlying construct. The final Cronbach value (0.80.) of the final questionnaire is further evidence of its validity and reliability.

This research explored the psychological states of Junior High School Teachers. Two hundred teachers in Ghana's Okere District were sampled to understand their emotional experiences. The first objective of the study was to determine whether teachers are able to regulate their emotions, as emotions play a crucial role in teaching and learning. The study found that teachers' thoughts influence their emotions, and that these emotions can be regulated. The majority of teachers responded that their thoughts affect their emotions. When regulating their emotions, a large percentage of teachers keep their emotions to themselves and do not express them. This means that they keep negative emotions such as anxiety, depression, anger, and stress to themselves. If these emotions stem from faulty thoughts and are not expressed, this may lead to maladaptive behaviours. This finding is consistent with Beck's Cognitive Behavioural Theory, which posits that thoughts give rise to emotions, which in turn influence behaviour. Therefore, when thoughts are faulty, they can lead to psychological problems. Furthermore, teachers' emotions have a bearing on their work output in the classroom and at home. Their ability to teach well, relate with their students and co-workers, undertake co-curricular activities, and manage their family effectively are largely dependent on their emotions.

This finding corroborates the work of Greenberger and Padesky [26]. In their book "Mind over Mood," they argue that an individual's thoughts can be regulated. Xiyun et al [27] & Sutton et al [28] also found that teachers are able to regulate their emotions. In Xiyun et al's [27] study, it was revealed that emotional regulation and self-efficacy were predictors of teachers' psychological well-being. Teachers were more likely to experience satisfaction and joy with their job and enrich their personal growth as they reached a strong mental health state when they were able to regulate their emotions well. Sutton et al. [28] found that teachers use preventive and reactive methods in regulating their emotions.

However, Mauss & Bunge [39], in their study on Automatic Emotional Regulation, demonstrated that teachers cannot always regulate their thoughts and emotions. They argued that some thoughts are automatic and arise automatically; hence, individuals have no control over automatic thoughts and cannot always regulate them. Moreover, because an individual's thoughts cannot always be regulated, it follows that their emotions cannot always be regulated either. The few teachers who reported in this study that they could not regulate their thoughts or emotions may be dealing with automatic thoughts. These thoughts, according to Mauss & Bunge [39], are not under the control of any

individual. Since this study did not consider thoughts in detail, future studies should investigate how automatic emotions can be managed to help teachers achieve stable emotional stability.

Contrary to the findings of this study, Ntoaduro [40] found that teachers in southern Ghana express a wide range of emotions towards their students in the classroom. The finding is confirmed by Anaglooso [41] which suggests that teachers' emotional expression was dependent on their students' behaviour in the classroom. However, in the current study, teachers' emotional expression was assessed more generally. Reuben (2017) found that teachers are emotionally resilient and able to withstand challenging circumstances due to their knowledge and expertise, which may explain why they do not express their emotions. Additionally, Zembylas [42] argued that if teachers are unable to manage their emotions effectively, they may experience physical and emotional exhaustion, diminished personal accomplishment, and emotional drain.

The second objective of the study was to investigate whether teachers' emotions affect their sleeping behaviour. The findings revealed that teachers' emotions do indeed impact their sleep patterns. The majority of teachers reported dissatisfaction with their sleeping patterns and stated that their emotions affected their sleep. This may be due to the prevailing economic conditions in the country and the pressure and victimization of teachers in the district. These findings are consistent with several studies in the literature.

McGinley & Wei [30] found that emotions affect teachers' sleep. Their study revealed that life satisfaction influences teachers' emotions, with low life satisfaction leading to negative emotions that in turn affect sleep. El Baba et al. [43] reported a negative association between sleep and negative emotions among medical officers at the University of Beirut. Like teachers, medical officers have stressful work patterns and high levels of emotional exhaustion due to their demanding work lives [44-51].

In another study conducted by Vandekerckhove and Wang [32], they found out that adoptive emotional regulation affect sleep of people. This study also corroborates the findings of this study that emotions affect sleep behaviour of people, especially teachers. Laura et al (2021) also confirmed the finding of this study. They found out that contagion of anger was positively associated with both sleep disturbances and health problems whereas contagion of joy was negatively related to only sleep disturbances. This means that specific emotional characteristics have different effect on sleep patterns of people. From this study, when people are happy, it affects sleep positively vice versa.

5. LIMITATIONS THE STUDY

The study has some limitations, despite its notable impact in providing insight into how teachers regulate their emotions and the effect of emotions on their sleep patterns. The study could have explored the emotional regulation strategies that teachers adopt to control their emotions and the effect of emotions on their work in the classroom. Additionally, a mixed-methods approach could have been used to collect more comprehensive information from the respondents. Although the study found that teachers regulate their emotions, it is recommended that future research employ multiple elicitation techniques, such as reflective journals and interviews, to triangulate the findings. Further research is also needed to better understand and explain the effect of emotions on teachers' work output in the classroom and the various emotional regulation strategies used by teachers. Longitudinal or intervention studies may provide more insight into the causal relationships among these constructs.

6. IMPLICATIONS FOR COUNSELLING

The results show that teachers have a considerable need for focused counselling interventions in coping methods and emotional regulation. The development of effective ways to cope and emotion regulation methods should be a top priority of counselling due to the high prevalence of emotional dysregulation (e.g., changing thoughts to modify emotions) and its link with irregular sleep patterns and poor sleep quality. This could involve mindfulness exercises to raise emotional awareness, cognitive behavioural therapy to address negative thought patterns, and relaxation methods to encourage deeper sleep. Moreover, the sample's male preponderance and marital status point to the necessity for specialised therapy services that consider marital and gender-specific stressors. Lastly, given the over-representation of people in higher positions, it could be necessary to address the demands that come with the job and how they affect people's emotional health and sleep.

7. CONCLUSION

The study found that teachers are able to regulate their emotions, but often keep their emotions to themselves, which can affect their sleep patterns. Although teachers are considered knowledgeable and capable of handling challenging situations, their emotions must be carefully managed. Teachers may be experiencing serious emotional problems that they are unable to share, and if left unaddressed, these issues can affect their health and ultimately their work performance in school and their family life. To improve teachers' productivity, they should receive psychological training on effective emotional regulation strategies. In-service training on emotional regulation should be regularly provided to help teachers manage their emotional challenges. Additionally, counselling services should be strengthened in schools and districts to provide support for teachers. Stakeholders involved in teacher training should incorporate instruction on managing psychological and emotional issues. Since teaching is a stressful profession, psychological training can be beneficial in helping teachers cope with the demands of their job.

The final questionnaire has strong psychometric properties, including a clear factor structure and adequate reliability. For measuring psychological state of teachers, it is a valid and reliable tool. Future studies can use this tool to examine the connections between psychological state and other variables of interest.

8. RECOMMENDATIONS

Implement targeted emotional regulation training for teachers: Since teachers' emotions have a substantial impact on their health, how well they perform at work, and how much sleep they get, it is important to give workers means of emotional control. The main goals of this training should be to recognise and confront harmful thought patterns and to create coping skills for managing stress, anxiety, and other negative emotions.

Investigate the role of automatic thoughts in emotional dysregulation. Nevertheless, this study demonstrated that the majority of teachers are able to control their emotions, some of them said they had challenges. Therefore, more study should examine the impact of automatic thoughts and create interventions that especially address this facet of emotional regulation as suggested by Mauss & Bunge (2007).

Examine the interplay between emotional expression, resilience, and cultural factors: The study discovered—contrary to certain earlier findings—that educators frequently repress their feelings. It would be beneficial to do additional research to fully understand this gap, taking into account elements like cultural norms concerning emotional expression, professional resilience, and the possible long-term effects of emotional repression on teachers' well-being.

DATA AVAILABILITY

The analyzed data is stored in a password-protected electronic file, maintained confidentially by the study's principal investigator, and is available upon request.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

The authors declare that in this study, ChatGPT-4o, developed by OpenAI, was used for proofreading the final manuscript. The specific prompt provided was "Please, proofread and clarify the text of a manuscript for publication, using active voice, British English, and aiming to preserve the original meaning as much as possible''.

INFORMED CONSENT

The authors obtained written informed consent from all participants after providing a full explanation of the study's objectives and guaranteeing anonymity.

ETHICAL APPROVAL

As per international standards ethical approval was obtained and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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